1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

CA

22

Use of deasphalting to produce ceresin. L. G. Zhuravlev and K. V. Vozneseenskaya. *Neftyanoe Khoz.* 29, No. 11, 58-60(1940).—The propane-propylene fraction of cracked gases was used for deasphalting a waxy deposit removed from production tubing in wells in the Ishimbaevo fields. The deasphalting was conducted in an autoclave at 50-60° with 8 vols. of diluent per vol. of the raw material. The deasphalted product has a bright-green color in reflected light, and a pale orange when melted. It m. 51° and contains 35% wax m. 63°, 2.19% Conradson carbon, and 17.6% resins by the silica gel method of Marcusson, compared to 5.54% carbon and 33% resins in the original material. No difficulties were encountered in subsequent deoiling and percolation with clay. The final product consists of pure white paraffin and ceresin. Equally good results were obtained in deasphalting crude ozocerite from the Cheleken island. Very hard asphalt is obtained as a by-product. Bruno C. Metzner

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

PROCESSES AND PROPERTIES INDEX

**Central Asian crude oils as raw material for the production of paraffin wax and lubricating oils.** L. G. Zhetleva, M. Kh. Starkisova, and R. M. Gutman. *Neftyanoe Khoz.* 24, No. 12, 37-42(1946). —Andizhan crude oil contains 10% wax m. 53° and 13% resins. Neftegorsk crude oil of sp. gr. 0.8538 contains 9.8% wax m. 51° and 18% resins. Data on the fractional compn. of topped crude oil from both sources and on properties of their distillates are tabulated. A lubricating-oil distillate b. 330-475° (33% on Andizhan crude oil) was dewaxed by chilling and filter-pressing to yield 13.2% of slack wax contg. 78.2% paraffin wax m. 51.5° and 84% of pressed distillate having a pour point of −1°. Distillates from the above crude oils have higher viscosities than those from Grozny crude oils.
Bruno C. Metzner

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720001-9"

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720001-9"

ZHERDEVA, L.G.

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Natural Gases and Petroleum. Motor Fuels. Lubricants. I-13

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12974

Author : Zherdeva L.G., Karaseva A.A., Voznesenskaya Ye.V.

Title : Oils from Eastern Sulfur-Containing Petroleum

Orig Pub : Khimiya i tekhnologiya topliva, 1956, No 1, 50-57

Abstract : Detailed investigations of Tuymazinskaya, Stavropol'skaya, Bavlinskaya and Romashkinskaya petroleum of Devonian deposits, as raw materials for the production of oils, as a result of which it was found that as concerns yields and quality of the oils the Tuymazinskaya petroleum is the best. The principal component part (50-60% and higher) of the oil fractions of sulfur-containing petroleum is a complex mixture of aromatic hydrocarbons and S-compounds of different structure and properties. As a result of deasphaltization with propane (of not less than 95% purity),

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[redacted] hydrocarbons to the high-boiling fractions of

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65-12-3/9

AUTHOR: Sidlyaronok, F.G., Zherdeva, L.G. and Potanina, V.A.

TITLE: On the Problem of Structural-group Composition of Oils (K voprosu opredeleniya strukturno-gruppovogo sostava masel)

PERIODICAL: Khimiya i Tekhnologiya Topliva i Masel, 1957, No.12, pp. 22 - 31 (USSR)

ABSTRACT: A comparison of results of determinations of structural-group composition of finished oils and fractions of aromatic compounds, obtained by adsorption separation of extracts from selective refining of raw oils is described. Calculations of the group composition were carried out by the following methods: 1) catalytic hydrogenation with the calculations according to Vlugter and Waterman; 2) catalytic hydrogenation with the calculations according to the formulae Van Nes and Van Westen (direct method); 3) without hydrogenation using the Vlug'ter, Waterman and Van Weston method; 4) the n-d-M method, and 5) Dinsli and Carlton method. As a basis for comparison with other methods, the results obtained by the Vlug'ter, Waterman and Van Weston method with catalytic hydrogenation were taken. Data on the physico-chemical properties of oils before and after hydrogenation (Table 1); group compositions determined by the above methods (Table 2); limiting and mean deviations of the values for group compositions determined by the above

Cardl/3

65-12-3/9

On the Problem of Structural-group Composition of Oils.

methods (Table 3); physico-chemical properties of the initial and hydrogenated polycyclic aromatic fractions, their group compositions and deviations in the compositions determined by the above methods (Tables 4, 5 and 6, respectively); the comparison of group composition of the fractions determined by the density and $M-n_D^{20}$ methods (Table 7). On the basis of the results obtained, the following conclusions are drawn: 1) Methods of calculating group composition without hydrogenation in a number of cases give considerable deviations in comparison with the data obtained with hydrogenation; 2) on calculating group composition of finished oils, the following methods can be applied with equally good results: catalytic hydrogenation according to Vlug'ter, Waterman and Van Weston, the direct method of Van Nes and Van Weston, the method of Vlug'ter and Waterman without hydrogenation and the n-d-M method; 3) data on the determination of group composition of polycyclic aromatic compounds obtained without hydrogenation deviate considerably from the results obtained with the hydrogenation. The deviation increases with increasing refractive index of the fraction investigated; 4) the Dinsli and Carlton method gives more accurate contents of aromatic rings than

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65-12-3/9

On the Problem of Structural-group Composition of Oils.

other methods (without hydrogenation). The determination of the content of other structural groups - this method gives considerable deviations. There are 7 tables and 18 references, 8 of which are Slavic.

ASSOCIATION: VNII NP

AVAILABLE: Library of Congress

Card 3/3

ZHERDEVA, L. G., and SIDLYARONOK, F. G.

"The Structure and Properties of Aromatic Compounds Contained in the High Boiling Petroleum Fractions." p. 54.

Composition and Properties of the High Molecular Weight Fraction of Petroleum; Collection of Papers on the Composition and Properties of Crudes and Petroleum Products, Moskow, Izd-vo AN SSSR, 1958. 370pp. (In-ta nefti)
2nd Collection of papers publ. by AU Conference, Jan 56, Moscow.

This article considers the structure and properties of aromatic compounds from two types of eastern petroleum: Tuymazy petroleum paraffinic, sulfur containing) and Emba petroleum (low paraffin, low fulfur content). It was determined that high molecular weight aromatic compounds separated from sulfur-containing petroleum consist of a mixture of polycyclic (3 - 7 cycles in an average molecule), mostly condensed aromatic hydrocarbons, and sulfur compounds similar in their properties to aromatic hydrocarbons. The calculation of the structural group composition from physicochemical constants without hydrogenation shows considerable disagreement with the composition determined on the basis of hydrogenation, and therefore cannot be used for fractions of polycyclic high molecular weight aromatic compounds.

ZHEREBEVA, L. G., KROL', B. B., OSTROUMOVA, Ye. A.

"Composition of OIls by Means of Adsorptive Separation," p. 81
Composition and Properties of the High Molecular Weight Fraction of Petroleum; Collection of Papers on the Composition and Properties of Crudes and Petroleum Products, Moscow, Izd-vo AN SSSR, 1958, 370pp (in-to nefti)
2nd Collection of papers publ. by AU Conf. Jan 56, Moscow.

~~Composition of oils by means of Adsor~~

This paper gives a description of the adsorptive separation method as used in the oil chemistry laboratory of the VNIINP to determine the chemical composition of crudes and oils. It is designed for the determination of group composition of dls, oil distillates, residues and extracts. Application of this method to the analysis of crudes gives an estimate of the yield and quality of dils produced.

"Study of Solid Hydrocarbons From Sulfur-Containing Eastern Crudes" p. 218

**Composition and Properties of the High Molecular Weight Fraction of Petroleum; Collection of Papers, Moscow, Izd-vo AN SSSR, 1958. 370pp. (Inta nefti) 2nd Collection of papers publ. by AU Conference, Jan 56, Moscow.**

It was determined that highly refined solid hydrocarbons obtained from a deasphalted Tuymazy crude concentrate (b.p. $> 350^{\circ}$) belong to the methane series and are mainly normal paraffins ($C_{23}$ to $C_{36}$). Solid hydrocarbons with m.p. $> 65^{\circ}$ contain about 35 percent isomeric methane hydrocarbons. There are 12 figures, 6 tables, and 19 references of which 9 are Soviet and 10 English.

"Physicochemical Study of Asphaltic-Resinous Substances From Eastern Crudes"
p. 266

**Composition and Properties of the High Molecular Weight Fraction of Petroleum; Collection of Papers, Moscow, Izd-vo AN SSSR, 1956. 370p. (Luta nefti) 2nd Collection of papers publ. by AU Conference, Jan 56, Moscow.**

Propane treatment yields products with a high hydrogen content and high molecular weight. Phenol treatment gives products of lower molecular weight, high density, and high S, N, and O content. Resins from Tuymazy and Emba crudes are composed of polycylic compounds containing S, N, and O, with average molecules of 4 - 6 cycles. The average molecule contains not only aromatic cycles, but also considerable amounts of naphthenic (sometimes up to 50%) and paraffinic (40 ÷ 50%) cycles, basically short. There are 7 tables, 3 figures, and 13 references of which 12 are Soviet and 1 German.

ZHERDEVA, L. G., KARASEVA, A. A., VOZNESENSKAYA, E. V., ALTSHULER, A. E., KROL, B.B., CROCHKO, D. I., AKIMOV, V. S., MIKHAYLOV, B. B., AGAFONOV, A. V., DRUZHININA, A. V.,

"Production of Lubricating Oils and Paraffin from Sulfurous Oils in the USSR."

Report title submitted at the Fifth World Petroleum Congress, 30 May - 5 June 1959, New York City.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720001-9"

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APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720001-9"

ZHERDEVA, L.G.; SOROKINA, Ye.N.; SLABKOVSKAYA, O.A.

Composition of solid paraffins obtained from sulfurous petroleum. Khim. i tekh. topl. i masel 10 no.3:26-29 Mr '65. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gazov i polucheniyu iskisstvennogo zhidkogo topliva.

SEREBRYAKOVA, Z.G.; KANTER, D.TS.; ZABRAN, E.S.; ZHERDEVA, L.G.; POTANINA, V.A.

Methods for testing mineral oils used in the manufacture of acetate and viscose cord fibers. Khim. volok. no.1:62-64 '65. (MIRA 18:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (for Serebryakova, Kanter, Zabran). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva (for Zherdeva, Potanina).

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720001-9"

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720001-9"

AUTHOR: Potapova, V. A.; Zhernova,

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R002064720001-9"

SIDLYARONOK, F.G.; ZHERDEVA, L.G.; ROZHDESTVENSKAYA, A.A.; DETUSHEVA, E.P.; SLABKOVSKAYA, O.A.

Using the extracts of phenol purification as plasticizer fillers for synthetic rubbers. Trudy VNII NP no. 9:52-67 '63.
(MIRA 17:6)

CHESNOKOV, A.A.; ZHERDEVA, L.G.; Prinimali uchastiye: KOZHEVNIKOV, S.A.; PYATILETOVA, N.I.; POPOVA, L.D.; LEVINA, L.P.

Effect of resins on the process of dewaxing of residual raffinates. Khim. i tekh. topl. i masel 8 no.7:23-30 Jl '63. (MIRA 16:7)

1. KNII NP i Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gazov i polucheniyu iskusstvennogo zhidkogo topliva.
(Petroleum—Refining) (Paraffin wax)

ZHERDEVA,L.G., VOZNESENSKAYA,V., KARASEWA, A.A.,

Chemisch-technologische Untersuchungen bei der industriellen Herstellung von Schmierolen aus paraffin-und schwefelhaltigen Erdolen.

Report to be submitted for the Symposium Lubricants and Lubrication, Dresden, 27-30 June 1961

CHERNOZHUKOV, N.I., doktor tekhn. nauk, prof., nauchnyy red.; ZHERDEVA, L.G., red.; IVANOVA, L.V., red.; ISAGULYANTS, V.I., red.; ISMAILOV, R.G., red.; KREYN, S.E., red.; KULIYEV, A.M., red.; MAMEDOV, M.A., red.; PAPOK, K.K., red.; SPEKTOR, Sh.Sh., red.; FEDOTOVA, A.F., red.; SHKHIYAN, S.Kh., red.; LEVINA, Ye.S., ved. red.; POLOSINA, A.S., tekhn. red.

[Improvement of the quality and the production of lubricating oils] Uluchshenie kachestva i sovershenstvovanie proizvodstva smazochnykh masel; trudy. Moskva, Gostoptekhizdat, 1963. 255 p. (MIRA 16:6)

1. Vsesoyuznoye soveshchaniye po uluchsheniyu kachestva bakinskikh smazochnykh masel i usovershenstvovaniyu tekhnologii ikh proizvodstva, Baku, 1961.

(Lubrication and lubricants)

S/081/62/000/004/071/087
B138/B110

AUTHORS: Krol', B. B., Zherdeva, L. G., Rozanova, Z. I.

TITLE: The influence of natural organosulfur compounds on the stability of low viscosity oil from Tuymazy crudes

PERIODICAL: Referativnyy žhurnal. Khimiya, no. 4, 1962, 483, abstract 4M191 (Sb. "Khimiya seraorgan. soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh. v. 4". M., Gostoptekhizdat, 1961, 189-193)

TEXT: In experiments carried out in connection with a study of the stability of low S deep refined transformer oil from Tuymazy crude, and also of the detarred part of this oil before and after removal of the S-compounds, the natural S-containing organic compounds were found to have a positive effect on the stability of the oil with regard to oxidation. The S-compounds appear to play a particularly positive role as oxidation inhibitors for oil consisting of naphthenic and monocyclic aromatic hydrocarbons. When the cyclicity of the aromatics contained in the oil is increased, the inhibiting effect of the S-compounds is maintained. [Abstracter's note: Complete translation.]

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S/204/61/001/005/004/008
E075/E484

AUTHORS: Zherdeva, L.G., Karzhev, V.I., Sil'chenko, Ye.I., Detusheva, E.P., Robozheva, Ye.V., Sidlyaronok, F.G., Lebedeva, N.M.

TITLE: Isomerization of hydrocarbons from petroleum paraffin waxes

PERIODICAL: Neftekhimiya, v.1, no.5, 1961, 639-647

TEXT: Results are given of investigation into the isomerization of solid paraffin waxes separated from high-sulphur crudes in refineries. 98.6% of the waxes boiled between 350 and 450°C. Their melting point was 51°C, sulphur content 0.03% and oil content 2%. The waxes were typical commercial waxes with relatively high oil content. Isomerization was conducted in a laboratory flow apparatus under hydrogen pressure. Molten wax at 100°C mixed with hydrogen was fed into the reactor filled with 100 ml of catalyst. The reactor temperature ranged from 390 to 430°C. Industrial platinum catalyst was used. In some of the experiments, 3% wt benzene was added to the wax to elucidate the influence of aromatic hydrocarbons on the processes of chain

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Isomerization of hydrocarbons ... S/204/61/001/005/004/008
E075/E484

rupture and isomerization. Table 1 gives optimum reaction conditions together with some properties of the products. The presence in the products of isoparaffins is shown by the fact that a considerable lowering of their solidification point occurs after treatment with urea. Three fractions of the products were selectively dewaxed and clay-treated. Yields of the dewaxed oils varied from 82 to 75%, for the fractions boiling between 300 and 350°C, to 38% for the fractions boiling between 400 and 450°C. Solidification temperature for all dewaxed oils varied between -30 and -34°C. The wax separated during dewaxing contained about 90% urea adductable material and therefore is suitable for adding to the feedstock. Isomerization of wax of m.pt. 58 to 60°C gives large quantities of paraffins boiling between 350 to 450°C, which have a special interest for oxidation to fatty alcohols and acids. Oils solidifying below -40°C were produced by a two-step dewaxing, the second step consisting of urea treatment. The oils have relatively low viscosities (3.5 to 10.1 cs at 50°C and 2.5 to 3.4 cs at 100°C) and high viscosity indices (115 to 142). Viscosity-gravity constants of the oils are below 0.77, densities lower than

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33586
S/204/61/001/005/004/008
E075/E484

Isomerization of hydrocarbons ...

0.83 and refractive index $n_D^{20}$ less than 1.4660. It is concluded that the oils consist of highly isomerized paraffinic hydrocarbons. The content of aromatic hydrocarbons in the oils varies from 8 to 12%. It is thought that they are mainly homologues of naphthalene. The oils obtained in the experiments in the presence of benzene have almost no resins, whereas the other oils contain 0.5 to 0.7% resins and are somewhat darker. The aromatic hydrocarbons improve oxidation stability of the oils as measured by sludge formation and acid value after testing by method VTI. More viscous oils (SAE 10) were obtained by adding 2% Acryloid 150 and polymethacrylate "D" (obtained in VNII NP) to the oils. The viscosity index is thus increased to 182 - 187. It is concluded that the isomerization constitutes a possible commercial process for the production of lubricating oils with high viscosity indices. There are 10 tables and 17 references: 5 Soviet-bloc and 12 non-Soviet-bloc. The four most recent references to English language publications read as follows: Ref.8: P. Schenk, A.B.H.Varvorn, H.I.Waterman, A.B.R.Weber. J. Inst. Petrol., v.42, 1956, 205; Ref.9: E.L.Breimer, H.I.Waterman, A.B.R.Weber.

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33586

Isomerization of hydrocarbons ... S/204/61/001/005/004/008
E075/E484

J. Inst. Petrol., v.43, 1957, 407; Ref.10: Brit. Pat. J. 66027, 28 March 1955; Ref.11: I.W.Gibson, G.M.Good, G.Holzman. Industr. and Engng. Chem., v.37, no.16, 1959, 16.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti, gaza i polucheniyu iskusstvennogo zhidkogo topliva VNII NP, g. Moskva (All Union Scientific Research Institute for Oil and Gas Refining and the Production of Synthetic Liquid Fuel VNII NP, Moscow)

SUBMITTED: July 28, 1961

Card 4/4

POTANINA, V.A.; ZHERDEVA, L.G.

Structure and properties of aromatic compounds in the oil fraction of sulfur-bearing crudes. Khim.i tekh.topl.i masel 5 no.5:26-31 My '60. (MIRA 13:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gazov i polucheniyu iskusstvennogo zhidkogo topliva.
(Petroleum--Refining) (Aromatic compounds)

SOV/81-59-16-58483

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 16, p 408 (USSR)

AUTHORS: Zherdeva, L.G., Sidlyaronok, F.G.

TITLE: The Structure and the Properties of Aromatic Compounds Contained in High-Boiling Petroleum Fractions

PERIODICAL: V sb.: Sostav i svoystva vysokomolekul. chasti nefti. Moscow, AN SSSR, 1958, pp 54-68

ABSTRACT: The structure and the properties of aromatic hydrocarbons (AH) of paraffin sulfurous oil (from Tuymazy) and of low-paraffin, low-sulfur oil (from Emba) were investigated. High-molecular AH from sulfurous petroleum are a mixture of polycyclic (3 - 7 cycles in the neutralized molecule), mainly condensated AH and S-compounds with similar properties. In the neutralized molecule of aromatic fractions the content of aromatic and naphthene cycles is different.

A. Nekrasov.

Card 1/1

SOV/81-59-16-58563

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 16, p 419, (USSR)

AUTHORS: Krol', B.B., Zherdeva, L.G., Ostroumova, Ye.A.

TITLE: The Determination of the Chemical Composition of Oils by Means of Adsorption Separation

PERIODICAL: V sb.: Sostav i svoystva vysokomolekul, chasti nefti. Moscow, AN SSSR, 1958, pp 81-89

ABSTRACT: The description of a method of analytic adsorption separation on the silicagel ASK is given, with a grain size of 30-60 mesh, intended for determining the chemical group composition of oils, oil distillates, petroleum residues and extracts. The analyzed product is dissolved in heptane or a fraction of alkylate (FA) with a b. p. of 90-95°C. The desorption is carried out in the following order: FA, by a mixture of alkylate (30%) and benzene (70%) and by pure benzene; then the resins are extracted in a Soxhlet apparatus by a mixture of alcohol and benzene (35:65). Results are cited of the analysis of two distillates by the proposed method: 370-500°C from sulfurous petroleum and 375-480°C from Katangliya (low-sulfurous) petroleum. Some drawbacks of the method are mentioned, especially the presence of intermediate fractions consisting of a mixture of naphthene and aromatic hydrocarbons.

Card 1/1

B. Englin.

SOV/81-59-16-58555

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 16, p 417 (USSR)

AUTHORS: Sidlyaronok, F.G., Zherdeva, L.G.

TITLE: The Chemical Composition and the Properties of Extracts From Selective Purification of Oils

PERIODICAL: Tr. Vses. n.-i. in-t po pererabotke nefti i gaza i polucheniyu iskusstv. zhidk. topliva, 1958, Nr 7, pp 34-48

ABSTRACT: The physical-chemical properties and the chemical group composition of extracts from selective purification (by phenol and steam solvents) of residual oil raw material from sulfurous paraffin-base petroleum, low-sulfurous Emba and Baku paraffin-base petroleum, and also of a distillate of a mixture of sulfurous petroleum were investigated. The investigation was carried out with the application of deresination, deparaffination, adsorption separation on $SiO_2$, of molecular distillation and hydrogenation and also by spectral investigation of the narrow fractions. The dependence of the chemical composition of the extracts on the character of the raw material and the methods of purification has been established.

Card 1/1

Ye. Pokrovskaya.

KROL', B.B.; ZHERDEVA, L.G.; IOGANSEN, V.; ROZANOVA, E.I.

Composition and properties of aromatic hydrocarbons isolated from the 300°-400° distillate of Tuymazy oil. Trudy VNII NP no.7:48-62 '58. (MIRA 12:10)
(Tuymazy--Petroleum) (Hydrocarbons)

SOV/81-59-16-58512

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 16, p 411 (USSR)

AUTHORS: Zherdeva, L.G., Mikhaylov, I.A., Demchenko, A.D., Cherchenko, N.V., Timofeyeva, K.M.

TITLE: The Possibilities of Using the Continuous Process of Adsorption Separation of Petroleum Fractions

PERIODICAL: Tr. Vses. n.-i. in-t po pererabotke nefti i gaza i polucheniyu iskusstv. zhidk. topliva, 1958, Nr 7, pp 93-103

ABSTRACT: In a laboratory installation experiments were made regarding the continuous purification by an adsorbent (crumbled Al-Si catalyst) of distillate and deasphaltized residual fractions of sulfurous (Tuymazy, Romashkino, and their mixtures) and low-sulfurous (Emba, Zhirnovo, Baku) petroleum. The purification was carried out in the counter-flow system at continuous contacting of the descending adsorbent layer with the ascending raw material flow and with continuous desorption by solvents and regeneration of the adsorbent. The process can be applied to products of various viscosity and used to obtain oils, paraffins and fuels.

Card 1/1

Ye. Pokrovskaya.

SOV/81-59-16-58484

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 16, p 408 (USSR)

AUTHORS: Zherdeva, L.G., Sidlyaronok, F.G.

TITLE: The Chemical Composition and Properties of High-Boiling Fractions and Oils of Secondary Origin

PERIODICAL: Tr. Vses. n.-i. in-t po pererabotke nefti i gaza i polucheniyu iskusstv. zhidk. topliva, 1958, Nr 7, pp 221-244

ABSTRACT: The comparison of physical-chemical properties of directly distilled fractions of Romashkino petroleum (b. p. 300 - 400°C and 420 - 470°C) with fractions of catalytic cracking boiling in the intervals of 300 - 400°C; 330 - 400°C, 420 - 450°C and 450 - 500°C has shown that the fractions of catalytic cracking have considerably higher values of density, refraction coefficients, specific dispersion and iodine numbers. The chemical composition of the fractions are given. The naphthene hydrocarbons from fractions of catalytic cracking have a lower degree of cyclicity and a higher content of paraffin chains in the average molecule; at the same time the degree of cyclicity and the concentration of aromatic rings increases and the naphthene rings and the paraffin chains in the average mo-

Card Card 1/2

ZHERDEVA, L. G.

SOV/81-59-15-59016

Translation from: Referativnyy zhurnal. Khimiya. 1959, Nr 15, p 121 (USSR)

AUTHORS: Zherdeva, L.G., Sidlyarenok, F.G., Petanina, V.A.

TITLE: The Characteristic of Naphthene Hydrocarbons Contained in Extracts From Selective Purification of Oils

PERIODICAL: Mat. Vses. n.-i. in-t po pererabotke nefti i gaza i polucheniyu iskusstv. zhidk. toplива. 1958, Nr 7, pp 52 - 69

ABSTRACT: The data are compared on the characteristic of naphthene hydrocarbons which are contained in the raw material as well as in the extract and in the oil obtained at selective purification of this raw material. A total of forms of raw material of various origin was investigated: residue material from the petroleum and from sulfurous petroleum, distillate material from sulfurous petroleum and also extracts and oils obtained from these forms of raw material. The naphthene hydrocarbons were separated by adsorption chromatography on silicagel at the ratios to the raw material (1/12 - 1/8) : 1 for extracts and (1 - 10) : 1 for refined materials and initial raw material. Fractions with a specific dispersion (N. C) < [illegible] were consider as naphthene hydrocarbons. The structural-group

Card 1/2

The Characteristic of Naphthene Hydrocarbons Contained in Selected Petroleum Purification of Oils

composition was calculated according to [illegible] found that the naphthene hydrocarbons or extracts of [illegible] molecular weight have in all cases higher density values, refraction coefficients and lower viscosity indices than naphthenes separated from raw materials or oil. This means that naphthene hydrocarbons with a lower molecular weight and a higher number of cycles pass into the extract. The elementary composition of multi-ring, high-molecular naphthene hydrocarbons can be determined with sufficient accuracy from the values of specific refraction.

S. Rozenfel'd

Card 2/2

TARASENKO, M.I.; ZHERDEVA, N.T.

Rapid gravimetric method of determining calcium lactate and calcium gluconate. Sbor. nauch. rab. MFI 2:145-148 '59. (MIRA 14:1)

1. Kafedra neorganicheskoy khimii (zav. - dotsent M.I. Tarasenko) Moskovskogo farmatsevticheskogo instituta.
(CALCIUM--ANALYSIS)

TARASENKO, M.I.; ZHERDEVA, N.T.

Rapid gravimetric method of determining nickel with an aqueous solution of dimethylglyoxime. Sbor. nauch. rab. MFI 2:149-150 '59. (MIRA 14:1)

1. Kafedra neorganicheskoy khimii (zav. - dotsent M.I.Tarasenko) Moskovskogo farmatsevticheskogo instituta.
(NICKEL--ANALYSIS)

KIRENEVA, K.I.; KHLYSTOVA, Z.K.; SHARAPOVA, T.A.; POLTAVSKAYA, N.K.; KOLESNIKOVA, Z.K.; MARTEM'YANOVA, P.M.; GATILOVA, A.S.; ZHERDEVA, T.A.

Observations on the epidemiology of dysentery in Vladivostok. Zhur. mikrobiol. epid. i immun. 29 no.10:49-52 O '58. MIRA 11:12)

1. Iz Vladivostokskogo instituta epidemiologii, mikrobiologii i gigiyeny i gorodskoy sanitarno-epidemiologicheskoy stantsii.
(DYSENTERY, BACILLARY, epidemiology, in Russia (Rus))

DENISOV, P.I.; ZHERDEYEV, M.G.; KARAYEV, A.K.; KAYESHKOVA, S.M., ved. red.; VOROB'YEVA, L.V., tekhn. red.

[Drilling in gas and gas-condensate fields]Bureniе skvazhin na gazovykh i gazokondensatnykh mestorozhdeniiakh; materialy vyezdnoi sessii postoiannoi Komissii po bureniiu. Moskva, Gostoptekhizdat, 1962. 159 p. (MIRA 16:2)

1. Russia (1917- R.S.F.S.R.)Komissiya po bureniyu. 2. Krasnodarskiy sovnarkhoz (for Karayev).
(Krasnodar Territory--Condensate oil wells)
(Krasnodar Territory--Gas wells)

USSR/Human and Animal Morphology - Normal and Pathological. Circulatory System. S

Abs Jour : Ref Zhur Biol., No 11, 1958, 50274

Author : Zherdin, I.V.

Inst : Gorki Medical Institute

Title : Intramural Blood Vessels of the Stomach and Their Alterations in Peptic Ulcer

Orig Pub : Avtoref. dis. dokt. med. n., Gorikovsk. med. in-t, Gorikiy, 1957

Abstract : No abstract.

Card 1/1

USSR/Pharmacology. Toxicology. Cholinergic Drugs V

Abs Jour : Ref Zhur-Biol., No 8, 1958, 47546

Author : Zherdin I. V., Korobkova K. P.
Inst : Stalingrad Medical Institute
Title : Application of Tropacine in Ulcers and Cholecystitis. (Primeneniye tropatsina pri yazvennoy bolezni i kholetsistitakh).

Orig Pub : Sb. nauchn. rabot teor. i klinich. kafedr Stalingr. med. in-ta, Stalingrad, 1956, 269-273

Abstract : Tropacine (1) was administered to 62 patients with ulcers and cholescistitis; 30 of these patients were administered the drug internally in doses of 15 to 25 mg 2 to 3 times daily, and 32-- subcutaneously in doses of 10 to 20 mg in 24 hours (1% solution). The therapeutic effect upon the application of 1 was similar to that of

Card 1/2

USSR/Pharmacology. Toxicology. Cholinergic Drugs V

Abs Jour : Ref Zhur-Biol., No 8, 1958, 47546

Abstract : atropine. No improvement was noted in 13 of the patients. Side effects (dryness in the mouth, reduced vision and others) were more apparent when 1 was taken internally. Greater tolerance by the patients for 1 as compared with atropine was noted.

Card 2/2

ZHERDIN, I. V., Doc Med Sci -- (diss) "Intramural blood vessels of the stomach and their changes in ulcer ~~disease~~ affection." Gor'kiy, 1957. 24 pp (Gor'kiy State Med Inst im S. M. Kirov), 200 copies (KL, 2-58, 115)

ZHERDIN, I. V.

Diathermy of the head in peptic ulcers. Klin. med. Moskva 28 no. 9:66-70 Sept. 1950. (CIML 20:1)

1. Of the Faculty Therapeutic Clinic (Director -- Prof. A. I. Gefter), Gor'kiy Medical Institute imeni S. M. Kirov, Gor'kiy.

ZHERDIN, I.V.; SERGEYEVA, A.F.

Application of diathermy of pancreatic region in diabetes. Klin. med., Moskva 30 no. 11:86 Nov 1952. (CLML 23:5)

1. Docent for Zherdin. 2. Of the Faculty Therapeutic Clinic (Director -- Prof. A. I. Gefter) and of the Department of Pathological Physiology (Head -- Prof. Ya. A. Lazaris), Gor'kiy Medical Institute imeni S. M. Kirov.

ZHERDIN, I.V., dotsent.

Diathermy in infectious hepatitis. Klin.med. 31 no.3:88-89 Mr '53.
(MLRA 6:5)

1. Kafedra fakul'tetskoy terapii Gor'kovskogo meditsinskogo instituta imeni S.M. Kirova.
(Diathermy) (Liver--Diseases)

GRIGORENKO, N.P., kand. med. nauk, otv. red.; LEONOV, A.N., zam. otv. red.; SPERANSKIY, V.S., dots. red.; ZHERDIN, I.V., prof., red.; KARPOVA, L.P., dots., red.; PETROV, K.M., zasl. vrach RSFSR, red.; KARPOVA, P.V., kand. med. nauk, red.

[Papers on the anatomy of the circulatory system] Sbornik nauchnykh rabot po anatomii krovenosnoi sistemy. Volgograd, Nizhne-Volzhskoe knizhnoe izd-vo, 1964. 2 v. (MIRA 18:12)

1. Volgograd. Meditsinskiy institut. 2. Glavnyy vrach Oblastnogo onkologicheskogo dispansera Volgogradskogo meditsinskogo instituta (for Petrov). 3. Kafedra normal'noy anatomii Volgogradskogo meditsinskogo instituta (for Grigorenko, Speranskiy).

DOROFEYEV, Yu.G.; ZHERDITSKIY, N.T.; NEUDAKHINA, A.A.

Saving cobalt and nickel in the manufacture of permanent magnets. TSvet. met. 38 no.8:90-91 Ag '65. (MIRA 18:9)

ACC NR: AR7004857 SOURCE CODE: UR/0137/66/000/010/G033/G033

AUTHOR: Dorofeyev, Yu. G.; Zherditskiy, N. T.

TITLE: Some problems of dynamic hot pressing of metal powders and chip

SOURCE: Ref. zh. Metallurgiya, Abs. 10G233

REF SOURCE: Sb. Ispol'z. metoda dinamich. metallokeram. v struzhk. i poroshk. metallurgii. Rostov-na-Donu, 1966, 93-103

TOPIC TAGS: hot pressing, iron powder, aluminum powder, cast iron, aluminum alloy, magnesium alloy

ABSTRACT: An investigation has been made of the process of dynamic hot pressing of Sulin iron powder, electrolytic copper powder (composition of Cu+4 vol % of $Al_2O_3$), aluminum powder cast-iron chip, aluminum and magnesium alloy, and of a purified concentrate by abrasive machining waste of cast permanent magnetos. A functional dependence of the density of briquettes on the compression, which is in good agreement with experimental data on continuous hot pressing of various materials. The dependence of density on compression at different temperatures is

 UDC: 621.762.4.001

ACC NR: AR7004857

studied. It is established that the continuous hot pressing process can be used for obtaining nonporous materials from metal powders and chip. Orig. art. has: 4 figures and bibliography of 5 titles. A. Epik. [Translation of abstract] [NT]

SUB CODE: 11/

Card 2/2

GONCHAROV, I.N.; DOROFEYEV, Yu.G.; ZHERDITSKIY, N.T.

Hot hammer briquetting of copper base alloy chips. TSvet. met. 36 no.1:66-72 Ja '63. (MIRA 16:5)
(Copper alloys) (Scrap metals)

DOROFEYEV, Yu.G.; ZHERDITSKIY, N.T.

Obtaining a nonporous material from cast iron chips by the method of dynamic hot pressing. Porosh. met. 5 no.10: 47-55 O '65. (MIRA 18:11)

1. Novocherkasskiy politekhnicheskiy institut.

L 29658-66 EWP(k)/EWT(m)/T/EWP(e)/EWP(v)/EWP(t)/ETI IJP(c) JD/HM

ACC NR: AP6012776 SOURCE CODE: UR/0226/66/000/004/0079/0084

AUTHORS: Dorofeyev, Yu. G.; Zherditskiy, N. T.

ORG: Novocherkassk Polytechnic Institute (Novocherkasskiy politekhnicheskiy institut)

51
B

TITLE: Welding of heat-resistant sintered copper base alloys and cast copper by the dynamic compression method

SOURCE: Poroshkovaya metallurgiya, no. 4, 1966, 79-84

TOPIC TAGS: copper base alloy, welding, powder metal, aluminum oxide

ABSTRACT: The hot pressing of a mixture of Cu + 4% $Al_2O_3$ and its welding to the surface of cast copper were investigated. The investigation supplements earlier results of N. T. Zherditskiy and Yu. G. Dorofeyev (Sb. Metallokeramika v mashinostroyenii, NIIMASh, M., 1965). The density of the compressed powder specimens was determined by hydrostatic weighing and obeyed the relationship

$$\gamma = \gamma_{mon}\left(\frac{W}{W_{max}}\right)^{K},$$

where $\gamma$ and $\gamma_{mon}$ are the densities of the specimen and bulk material respectively, W and $W_{max}$ are the work of compression per 1 $cm^3$ of bulk material and the maximum

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L 29658-66

ACC NR: AP6012776

work required to obtain a nonporous material, and K is an empirical constant. The experimental results are presented graphically (see Fig. 1). It was found that the

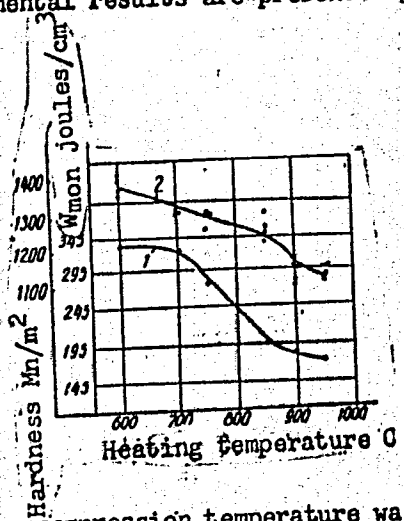


Fig. 1. Dependence of $W_{max}$ (1) and hardness (2) of the mixture Cu + 4% $Al_2O_3$ on the heating temperature.

optimum compression temperature was ~ 850C. The welding of Cu + 4% $Al_2O_3$ onto the surfaces of Cu electrodes extends their useful life by a factor of 2.5--3 times compared to ordinary copper electrodes. Orig. art. has: 1 graph, 3 photographs, and 1 equation.

SUB CODE: 11,13/ SUBM DATE: 11Apr65/ ORIG REF: 007

Card 2/2

SUVOROV, V.T.; ZHERDIY, N.I.

Behavior of hybrid barley. Trudy OGMI no.18:91-98 '59.
(MIRA 13:5)

(Ukraine--Barley breeding)

ZHERDIX, N.I.

Spot seeding of mother beets. Sakh.prom. 33 no.6:62-63 Je '59.
(MIRA 12:8)

1. Sveklosovkhos Novo-Ukrainskogo sakhkombinata.
(Sugar beets)

VULIKH, A.I. (Novosibirsk); KAZ'MINSKAYA, V.A. (Novosibirsk); ZHERDIYENKO, L.P. (Novosibirsk)

Chemical experiments with the use of ion exchangers. Khim. v shkole 18 no.5:57-65 S-O '63. (MIRA 17:1)

VULIKH, A.I.; KAZ'MINSKAYA, V.A.; ZHERDIYENKO, L.P.

Ion exchange method for obtaining acids from poorly soluble salts. Prom.khim.reak. i osobo chist.veshch. no.2:7-13 '63. (MIRA 17:2)

VASIL'YEV, M.; GUSHCHEV, S.; NESMEYANOV, A.N., akademik; SHCHERBAKOV, D.I., akademik; ENGEL'GARDT, V.A., akademik; ZHEREBAK, A.R., prof.; LEBEDEV, S.A., akademik; ZENKEVICH, L.A.; GRADOV, A.B.; GOLODOVSKIY, M.G., prof.; STANYUKOVICH, K.P., prof.

Ahead with the dream! Znan.sila 33 no.12:24-25 D '58. (MIRA 11:12)

1. Chlen-korrespondent AN SSSR (for Zendevich). 2. Direktor Nauchno-issledovatel'skogo instituta proyektirovaniya obshchestvennykh zdaniy i sooruzheniy (for Gradov).
(Science)

ZHEREBCHENKO, P.G., STARKOV, P.M., KLYKOV, N.V., and KARPOVICH, O.A.

"Changes in the Functions of the Central Nervous System in Expeimental Hypothermia," published in the Proceedings of the Eighth ALL-Union Congress of Physiologists, Biochemists, and Pharmacologists, Moscow, 1955.

Abstract 1091961

ZHEREBCHENKO, P.G.

USSR/Human and Animal Physiology - Body Temperature Regulation. T-3

Abs Jour : Ref Zhur - Biol., No 10, 1958, 45848

Author : Zherebchenko, P.G.

Inst : AS UkrSSR.

Title : Some Characteristics of the Central Nervous System Activity in Warmblooded Animals under Conditions of General Chilling.

Orig Pub : Fiziol. zh. AN URSR, 1956, 2, No 2, 21-24.

Abstract : Dogs were chilled by being wrapped in rubber "blanket" equipped for water to flow through it. They were then subjected to stimulations by electric current which irritated the central terminal of their left vagus nerve, transected on the level of the lower edge of the thyroid cartilage. As the nerve vagus was stimulated in such manner, the usual inhibitory effects of this nerve upon

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USSR/Human and Animal Physiology - Body Temperature Regulation. T-3

Abs Jour : Ref Zhur - Biol., No 10, 1958, 45843

respiration were barely noticeable during the initial stages of chilling. When deeper coolong stages were reached, the inhibitory effect of the vagus nerve on the animals' respiration was not only restored, but was even stronger in many cases than before chilling. During the chilling period, the animal extremities were observed to display movements which coincided with the respiratory rhythm, as well as with the undulating fluctuations of blood pressure. Their highest magnitude (40-50 mm) was attained at a body temperature of 25-30° C. As the animals were warmed, the respiratory movements of their extremities and respiratory undulations of their blood pressure became much less pronounced. The author is of the opinion that these blood pressure changes are related to the variegated chilling and warming effects upon the radiation of respiratory impulses into the area of vasomotor centers. -- S.M. Shtevnberg.

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17 (10)

AUTHORS: Zherebchenko, P. G., Krasnykh, I. G., Lebkova, N. P., Yarmonenko, S. P.

SOV/20-129-6-63/69

TITLE: The Influence of Local Asphyxia of the Bone Marrow on the Course and Result of the Radiation Disease

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 6, pp 1427 - 1429 (USSR)

ABSTRACT: The transplantation of the bone marrow of a donor is difficult. Since the sensitivity of individual organs to radiation can be reduced by local asphyxia caused in these organs, the authors tied up the hind legs of test animals. If the lower third of the upper thigh is tied up, complete hemostasia and, consequently, hypoxia occurs in all lower parts, even in the bone marrow of the lower leg. 263 white rats and 503 white mice were investigated. They were exposed to total irradiation of 700, 750, and 800 r (intensity of doses: 49 and 32 r per minute, respectively). A round rubber band was used as a tourniquet which was applied before irradiation and taken off immediately after irradiation. The tourniquet proved to be favorable for the course and results of the radiation damage in all experiments (Table 1).

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The Influence of Local Asphyxia of the Bone Marrow on the Course and Result of the Radiation Disease SOV/20-129-6-63/69

40-80% of the mice of the test groups were still alive on the twelfth day (doses: 700-750 r) whereas all control animals died on the 8th - 10th day. Only 10-50% of the mice were alive on the 30th day. The average life period of the test animals was considerably longer than that of the control mice. The results with rats were similar. The fact whether one or two legs had been tied up was not essential for the surviving of test animals. Novocaine was locally used in order to eliminate the effect of functional shifts due to the pain reaction in applying the tourniquet. The effect of asphyxia was not reduced by this. This effect was determined by counting the degeneratively changed nuclei and the mitotic index on total preparations of mice and the micronecrotic centers of rats (according to M. N. Meysel', Ref 18). Figure 1 shows that local asphyxia considerably decreases the degeneration of the cells of the irradiated bone marrow, and considerably increases their mitotic activity. Rats had about 65% of micronecrotic centers less than the control animals (3 hours after irradiation). Local asphyxia of the bone marrow had no considerable effect on the intensity of leucopenia. The lower degree of bone-marrow injury is probably due to the

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The Influence of Local Asphyxia of the Bone Marrow on the Course and Result of the Radiation Disease SOV/20-129-6-63/69

reduced oxygen concentration. The effect of low metabolism has also to be taken into account. The effect determined combines with the protecting effect of mercamine. It can be maintained that the first effect will be increased by the complex of therapeutic methods used in the treatment of radiation diseases. Mercamine hydrochloride was synthesized by F. Yu. Rachinskiy. There are 1 figure, 1 table, and 19 references, 8 of which are Soviet.

PRESENTED: July 5, 1959, by I. L. Knunyants, Academician

SUBMITTED: July 5, 1959

Card 3/3

ZHEREBCHENKO, P.G.; KUZNETS, Ye.I.; MINEYEV, A.I. (Moskva)

Improved apparatus for the measurement of oxygen requirements in laboratory animals. Pat. fiziol. i eksp. terap. 4 no. 6:74-75 N-D '60. (MIRA 14:2)

(RESPIRATION)

ZHEREBCHENKO, P.G.; KRASNYKH, I.G.; LEBKOVA, N.P.; YARMONENKO, S.P.

Protective action of local asphyxia of the bone marrow in acute radiation injury in animals. Med.rad. 5 no.10:28-35 '60. (MIRA 14:2)

(RADIATION SICKNESS) (MARROW)
(BLOOD—CIRCULATION, DISORDERS OF)

ZHERNEBCHENKO, P.G.; GOLOVCHINSKAYA, Ye.S.; KOSTYANOVSKIY, R.G.; KRASNYKH, I.G.; KUZNETS, Ye.I.; MAGIDSON, O.Yu.; MURASHOVA, V.S.; PASTUKHOVA, I.S.; PREOBRAZHENSKAYA, M.N.; SUVOROV, N.N.; TER-VARTANYAN, L.S.; ZHKHINVADZE, K.A.; SHASHKOV, V.S.; SHCHUKINA, M.N.

Role of oxidative deamination in the mechanism of radiation protection afforded by some amines. Zhur.ob.biol. 21 no.2: 157-160 Mr-Ap '60. (MIRA 13:6)

(RADIATION PROTECTION) (DEAMINATION)

ZHEREBCHENKO, P.G.; SUVOROV, N.N.; SHASHKOV, V.S.; YARMONENKO, S.P.; MOROZOVSKAYA, L.M.

Mechanism of the radioprotective action of 5-hydroxytryptophan. Radiobiologiia 1 no.5:789-791 '61. (MIRA 14:11)
(RADIATION PROTECTION) (TRYPTOPHAN)

ZHEREBCHENKO, P.G.; KRASNYKH, I.G.; SHASHKOV, V.S.

Role of hypothermia produced with certain substances in the mechanism of radioprotective activity. Med.rad. 6 no.4:37-40 '61. (MIRA 14:12)

(HYPOTHERMIA) (RADIATION PROTECTION)
(RESERPINE--PHYSIOLOGICAL EFFECT)
(PYRROL--PHYSIOLOGICAL EFFECT)

ZHEREBCHENKO, P.G.; SUVOROV, N.N.; MURASHOVA, V.S.; PREOBRAZHENSKAYA, M.N.; SOROKINA, N.P.; FEDOROVA, M.V.

Radioprotective activity of some tryptamine derivatives and their homologues. Med.rad. 6 no.8:27-32 Ag '61. (MIRA 14:8)
(RADIATION PROTECTION) (INDOLE)

ZHEREBCHENKO, P.G.; KRASNYKH, I.G.; KUZNETS, Ye.I.; SUVOROV, N.N.; SHASHKOV, V.S.; YARMONENKO, S.P.

Radioprotective effect of the combined use of amines. Med.rad. no.3:67-72 '62. (MIRA 15:3)

(RADIATION PROTECTION) (AMINES)

30957

S/205/62/002/001/008/010
D268/D302

27.2400

AUTHORS: Krasnykh, I.G., Zherebchenko, P.G., Murashova, V.S., Suvorov, N.N., Sorokina, N.P., and Shashkov, V.S.

TITLE: The radioprotective effect of 5-methoxytryptamine and other alkoxytryptamines

PERIODICAL: Radiobiologiya, v. 2, no. 1, 1962, 156 - 160

TEXT: The radioprotective action of 4-, 5-, 6-, and 7-methoxytryptamine, and 5-ethoxy-, 5-propoxy-, 5-butoxy-, and 5-benzoxytryptamine was investigated. 2,900 white mice irradiated at 700 r and 120 white rats at 800 r were studied. There were 3 series of experiments. In the first, results showed that 5-methoxytryptamine gave over 60 % survival in irradiated mice. Further study in the second series revealed a prophylactic effect over a wide dose range (5 - 150 mg/kg) with an average 68.3 % survival at the optimum 75 mg/kg. Administered by intraperitoneal injection even 1 - 2 hours before irradiation there was a maximum 34 % survival, and orally at the optimum 250 mg/kg; 10 - 15 minutes before irradiation, there was 54 %

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S/205/62/002/001/008/010
D268/D302

The radioprotective effect of ...

survival, whereas serotonin was ineffective. Subcutaneous injection gave the same protection as intraperitoneal. In the third series of experiments on rats irradiated at 800 r survival was 50 - 63 %. Oral administration also gave protection. The experimental data showed the relationship between the chemical structure of some alkoxytryptamines and radioprotection. Structural changes in tryptamine, by introducing the methoxy radical at different positions on the indole ring increased or decreased radioprotection, increase occurring only when the methoxy radical was introduced at the fifth position. 5-methoxytryptamine gave protection comparable to that of serotonin. Its effectiveness may be due to more selective penetration of radiosensitive tissue. There are 4 figures and 11 references: 5 Soviet-bloc and 6 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: P.J.H. Wang, J.G. Kereiakes, Radiation Res., 11, 2, 476, 1959; Z.M. Bacq, and others, Experientia, 15, 5, 175, 1959; Z.M. Bacq, P. Alexander, Fundamentals of radiobiology, London, 1955; Z.M. Bacq, Acta radiol. 41, 1, 1954.

SUBMITTED: August 29, 1961

Card 2/2

40477
S/205/62/002/002/010/015
I020/I215

27 2400 abs 2220

AUTHORS: Krasnykh, I. G., Zherebchenko, P. G., Murashova, V. S., Suvorov, N. N. and Sorokina, N. P.

TITLE: Increased radiation-protective effect of the combined administration of 5-metoxytryptamine and merkamine

PERIODICAL: Radiobiologiya, v. 2, no. 2, 1962, 298–303

TEXT: This is the continuation of a previous study. White mice weighing 18–22 g were irradiated with 700 (LD 95/30), 800, 900, and 1000 r. White rats weighing 150–200 g received 800 r (LD 90/30). One group of animals received 75 mg/kg 5-metoxytryptamine, a second group — 150 mg/kg merkamine, a third received both drugs in the same dosage, and a fourth — no medication. Survival, body weight, amount of leucocyte in the peripheral blood, early degenerative changes in the bone marrow and spleen cells, and the weight of the spleen, thymus, and liver were considered. The combined administration of both drugs resulted in a summation of the radiation-protective effect. The survival was greater, the radiation sickness was milder, and recovery occurred earlier. Treatment of mice irradiated with 1000 r resulted in a 27.5% survival. Degenerative changes in the bone marrow and spleen cells, as well as a decrease in the weight of spleen and thymus, were less

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marked in animals thus treated. When 5-metoxytryptamine was combined with β-mercaptopropylamine good results were obtained, corresponding to those obtained by the combined use of serotonin and merkamin. There are 4 figures and 4 tables.

SUBMITTED: August 29, 1961.

416 8

S/205/62/002/005/017/017
D243/D307

27 1100
27 2490

AUTHOR: Zherebchenko, P.G.

TITLE: Distribution in the organs of mice of indolyl-alkylamines with different radioprotective properties

PERIODICAL: Radiobiologiya, v. 2, no. 5, 1962, 780 - 784

TEXT: The object of the work was to discover to what extent the differences in antiradiation activity of a substance are associated with the distribution of that substance in animals. The content of tryptamines with different radioprotective properties was studied in mouse organs after intraabdominal introduction of several tryptamine derivatives and homologs. Groups of four male white mice, 18 - 22 g in weight, were simultaneously given a 90 mg/kg dose of 5-methyltryptamine, 5-methoxytryptamine, γ-3-indolyl-propylamine, δ-3-indolylbutylamine, or 6-methoxytryptamine. After 15, 30, 60, 120 and 180 minutes the animals were beheaded, the internal organs were removed and sectioned, and the animals were extracted with 1 % HCl by the method of S. Udenfriend, H. Weissbach and B.B. Brodie (Methods of Biochemical Analyses, 6, 95, 1958). The amount of color

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produced by adding Erhlich's reagent to an acid solution of the amines was measured photoelectrically, the amount of amine being calculated from a calibrated curve. Controls gave no color. 5-methyltryptamine and 5-methoxytryptamine had a similar distribution, with a high concentration in liver, spleen, lungs and kidneys, much less in muscles, mucous membrane of the small intestine, and testicles, and were practically absent in the brain. Maximum concentration was usually reached in 15 minutes but considerable amounts were detected after 3 hours. The kidneys had, at all times, the greatest concentration. The compounds γ-3-indolylpropylamine and δ-3-indolylbutylamine also reached maximum (but lower) concentration, in 15 minutes. The concentration declined progressively with time, remaining high only in the kidneys and in the blood plasma. 6-methoxytryptamine reached the same levels as 5-methoxytryptamine after 15 -30 minutes, but it fell more rapidly in the spleen. The experiments were repeated with 50 mg/kg doses. It was shown that previous introduction in mice of α-methyltryptamine alters the distribution of 5-methoxytryptamine in the internal organs. There are 5 tables.

SUBMITTED: December 27, 1961

ZHEREBCHENKO, P.G.

Radiation protection with indole, its derivatives and some other compounds in vitro. Radiobiologiia 2 no.6:912-918 '62 (MIRA 16:11)

ZHEREBCHENKO, P.G.

AID Nr. 996-6 24 June

SICKNESS IN MONKEYS

severe acute radiation sickness

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AID Nr. 996-6 24 June

PROPHYLATIC EFFECT [Cont'd]

S/005/63/004/002/016/024

TITLE: Relation between the radio[illegible]

SOURCE: Radiobiologiya, [illegible]

TOPIC TAGS: radioprotective, [illegible]

ABSTRACT: Mice subjected to total [illegible]

indole ring resulted in increased radioprotective properties. The survival rate of the mice is given as [illegible]

SUBMITTED: 08Aug63 DATE ACQ: 15Aug63 ENCL: 00

SUB CODE: AM

Card 2/2

ZHEREBCHENKO, P.G.; AYRAPETYAN, G.M.; KRASNYKH, I.G.; SHEVCHENKO, A.N.

Effect of radioprotective preparations on neutral red distribution and hemoglobin content in the organs of mice and rats.
Radiobiologiia 4 no.1:136-143 '64. (MIRA 17:4)

ACCESSION NR: AP4027966 S/0205/64/004/002/0197/0202

AUTHOR: Grayevskiy, E. Ya.; Zherebchenko, P. G.; Konstantinova, M. M.; Sokolova, O. M.; Shevchenko, A. N.

TITLE: Relation of radioprotective activity of indolylalkylamines to tissue hypoxia and the role of vascular changes in its development

SOURCE: Radiobiologiya, v. 4, no. 2, 1964, 197-202

TOPIC TAGS: radioprotective action mechanism, indolylalkylamine radioprotective action, tissue hypoxia, vessel spasm, tryptomine derivative, radioprotective preparation, 4-,5-chlortryptamine, 4-,5-metoxytryptamine, serotonine, alpha-methyltryptamine, LSD, cystamine, oxygen intensity, cystamine radioprotective action

ABSTRACT: Literature studies have established that indolylalkylamine radioprotective action is related to tissue hypoxia. This work investigates the mechanism of this action by determining 1) whether the position of a substitute in a tryptamine molecule affects its capacity to produce tissue hypoxia, 2) how the introduction of alpha-methyltryptamine and LSD affects the hypoxic and vasoconstrictive

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ACCESSION NR: AP4027966

action of the preparations, and 3) how the combined use of 5-metoxytryptamine and cystamine affectsoxygen level and vessel reaction in tissues. The following preparations were administered intraperitoneally to experimental white mice: 4-chlortryptamine (60 mg/kg), 5-chlortryptamine (60 mg/kg), 4-metoxytryptamine (60 mg/kg),5-metoxytryptamine (60 mg/kg), and serotonine (50 mg/kg) 1 hr after administering alpha-methyltryptamine, cystamine (150 mg/kg) combined with metoxytryptamine (50 mg/kg), and LSD (10 mg/kg) combined with serotonine. Oxygen intensity in the liver and spleen of the animals was measured by a polarographic method. Vessel tone was determined by the accumulation of neutral red in the organs 30 min after being introduced (65 mg/kg in a 0.5 ml physiological solution). Findings show that tryptamine derivatives with substitutes in the fifth position (5-metoxy-, 5-chlortryptamine) are highly effective radioprotectors because of their capacity to produce hypoxia in radiosensitive organs by vessel spasms. Tryptamine derivatives with substitutes in the fourth position (4-chlor-, 4-metoxytryptamine) do not produce hypoxia or vessel spasms and are ineffective radioprotectors. Alpha-methyltryptamine and LSD remove the radioprotective effect of indolylalkylamines by preventing the development of vessel spasm and subsequent tissue hypoxia. Cystamine enhances the

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radioprotective action of tryptamine derivatives, but does not affect their capacity to constrict vessels and to develop hypoxia. The radioprotective action mechanisms of cystamine and the investigated indolylalkylamines differ. Orig. art. has: 4 figures, 2 tables.

ASSOCIATION: None

SUBMITTED: 06Apr63 DATE ACQ: 28Apr64 ENCL: 00

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Card 3/3

ACCESSION NR: AP4027973 S/0205/64/004/002/0239/0243

AUTHOR: Zherebchenko, P. G.; Krasnyukh, I. G.

TITLE: Role of oxidizing desamination in the radioprotective action mechanism of indolylalkylamines

SOURCE: Radiobiologiya, v. 4, no. 2, 1964, 239-243

TOPIC TAGS: oxidizing desamination, indolylalkylamine, radioprotective action mechanism, monoaminoxidase activity inhibitor, alpha-methyltryptamine, iproniazid, phenylisopropylhydrazine, 5-methoxytryptamine, peripheral blood circulation, vasoconstriction, hematoencephalitic barrier permeability, hemoglobin level, liver blood supply, brain blood supply, spleen blood supply

ABSTRACT: Literature studies have indicated that inhibitors of monoaminoxidase (MAO) activity affect the radioprotective action of indolalkylamines by changing their capacity to disturb peripheral blood circulation and blood distribution to bloodforming organs. Literature studies have also indicated that the oxidizing desamination process is significant in the radioprotective activity of indol group amines. The present study investigates the effects of certain MAO

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inhibitors, varying in brain permeability, on the radioprotective properties of 5-methoxytryptamine. In the first of two experimental groups of white mice, neutral red was introduced intravenously and at the same time 5-methoxytryptamine was administered intraperitoneally. In the second group of experimental animals, one of three MAO inhibitors (alpha-methyltryptamine, iproniazid, and phenylisopropylhydrazine) was administered before introducing the neutral red and 5-methoxytryptamine. In the control group, neutral red and a physiological solution (0.2 ml) were introduced. Animals were killed 30 min later to find neutral red distribution in the blood and organs and determine the hemoglobin levels. Findings show that 5-methoxytryptamine by itself reduces significantly the hemoglobin levels of the spleen and skin and increases the levels in the brain, lungs, muscles, liver and kidneys. Preliminary administration of alpha-methyltryptamine prevents the hemoglobin level changes in the organs produced by 5-methoxytryptamine. Alpha-methyltryptamine reduces the radioprotective action of 5-methoxytryptamine the most, phenylisopropylhydrazine reduces it somewhat less and iproniazid, which penetrates the brain poorly compared to the other two inhibitors, reduces it least. The dependence of MAO inhibitor properties on hematoencephalitic barrier permeability indicates central nervous system participation in these

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pharmacological reactions. The capacity of the three MAO inhibitors to weaken vascular reactions correlates well with their effect on the radioprotective activity of the indolalkylamine under investigation. Orig. art. has: 3 tables.

ASSOCIATION: None

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ACCESSION NR: AP4027977 S/0205/64/004/002/0259/0265

AUTHOR: Ayrapetyan, G. M.; Zherebchenko, P. G.

TITLE: Certain characteristics of radioprotective properties of beta-aminoethylthiophosphoric acid monosodium salt

SOURCE: Radiobiologiya, v. 4, no. 2, 1964, 259-265

TOPIC TAGS: beta-aminoethylthiophosphoric acid monosodium salt, radioprotective action, mercapto group, cystamine, mercamine, X-irradiation, gamma-irradiation, oral administration, subcutaneous administration, intramuscular administration, combined radioprotective effect, 5-metoxytryptamine

ABSTRACT: This study investigates only those characteristics of beta-aminoethylthiophosphoric acid monosodium salt which can be compared with the characteristics of other mercaptoamines. White mice, white rats, and dogs were used to test the efficacy of this preparation administered orally, subcutaneously, intramuscularly, and intraperitoneally at different times before irradiation. Mice and rats were X-irradiated (RUM-3 unit, 180 kv, 15 ma, focal length

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35 cm) with single 700-900-r doses, and dogs were gamma-irradiated (EGO-2 unit, 260-280 r/min) with single 300 r-doses. Preparation efficacy was determined by survival of rats and mice at the end of 30 days and of dogs at the end of 45 days. Additional experiments were conducted to determine the combined radioprotective effect of beta-aminoethylthiophosphoric acid monosodium salt and 5-metoxytryptamine administered to mice in a 900-r dose at different time sequences before irradiation. Results show that beta-aminoethylthiophosphoric acid monosodium salt is an effective radioprotective administered orally, subcutaneously, intramuscularly, or intraperitoneally. Also, in the case of subcutaneous and intramuscular use, it does not cause inflammatory and necrotic reactions, as cystamine and AET do. It is superior to cystamine in radioprotective action when administered orally, and it is twice as effective as the mercapto groups when administered in doses of the same quantity. In combination with 5-metoxytryptamine, its radioprotective action is most effective when it is administered first. "The authors express their sincere gratitude to Academician I. L. Knunyanets, Doctor of Chemical Sciences, O. V. Kil'dy*sheva, Candidate of Chemical Sciences, M O. Lin'kova, and also to Z. V. Benevolenskaya for the preparations." Orig. art has: 6 tables.

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ASSOCIATION: None

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